

Introduction to Modern Methods of Construction (MMC)

Free Modern Methods of Construction Guide



INTRODUCTION

Thank you for downloading our introductory guide to Selecting the right MMC system for your project. Whether you're exploring Modern Methods of Construction (MMC) for the first time or planning your project this guide will help you to understand some of the systems available and additional factors that can form part of your decision-making as you turn visions into reality.

You maybe asking what makes Dynamic Build Group experts in MMC? Well, we have 20+ years of heritage in accelerating the delivery of innovative, energy-efficient and sustainable homes and buildings with self builders and developers to the likes of Devon Council and Mears Group.

With completed projects ranging from bespoke single dwellings to standardised classrooms and large-scale residential developments to complex learning departments, we understand the challenges and opportunities of MMC.

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WHAT IS MODERN METHODS OF CONSTRUCTION (MMC)

Modern Methods of Construction (MMC) is far more than just modular buildings; it encompasses a wide range of innovative approaches aimed at transforming the construction industry. MMC is designed to improve efficiency, enhance quality, and drive sustainability throughout the building process.

It covers an array of systems and technologies, from timber frames and structural insulated panels (SIPs) to steel and concrete systems, as well as bathroom pods, cladding solutions, and advanced tools like drones and digital platforms. By integrating MMC it redefines how we design, build, and deliver construction projects.

THE 7 CATEGORIES OF MMC

The MMC framework was developed in collaboration with key industry organisations and positions MMC systems within seven distinct categories.

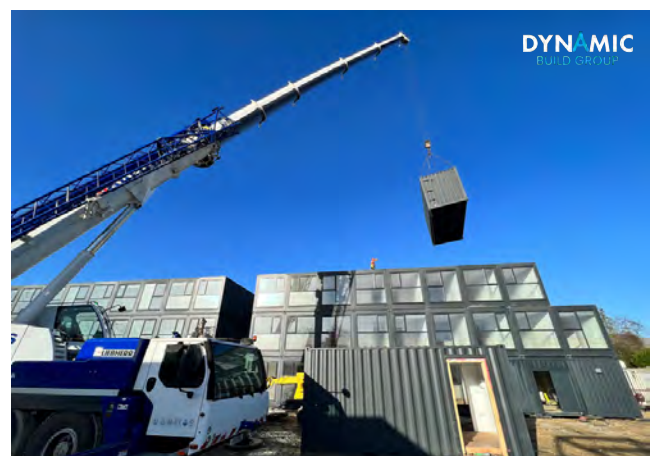
With Category 1 and Category 2 systems now widely adopted across the construction industry the chances are, you have encountered several buildings constructed using MMC systems without even realising they were MMC projects.

Category 1: Pre-Manufacturing - 3D Primary Structural Systems

Volumetric systems is the creation of 3D modules away from the construction site which are transported to the site and rapidly assembled. These systems are typically manufactured from timber or steel and are ideal for projects demanding speed and quality control.



Dynamic Build Group - Volumetric Modular education sector project



Dynamic Build Group - 200+ Shipping Containers for Social Housing project

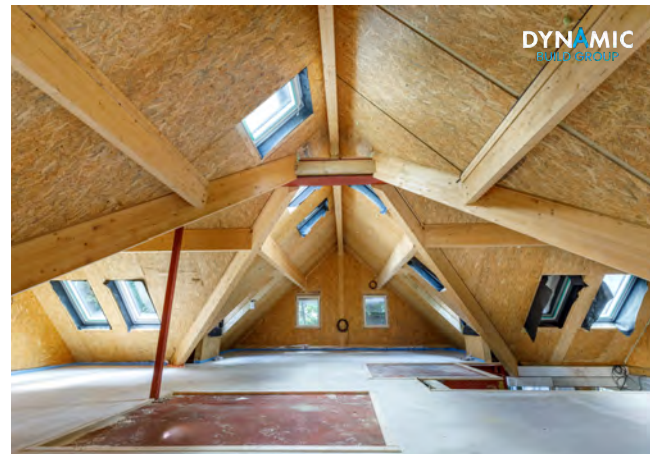
THE 7 CATEGORIES OF MMC (CONTINUED)

Category 2: Pre-Manufacturing - 2D Primary Structural Systems

Panelised wall, floor and roof systems including timber frame, structural insulated panels (SIPs), insulated concrete formwork (ICF), light gauge steel and other systems that are manufactured offsite and assembled onsite to create the superstructure.



Dynamic Build Group - Timber Frame with panelised floor and roof system



Dynamic Build Group - SIPs project with a glulam frame

Category 3: Pre-Manufacturing - Non-Systemised Structural Components

Individual components such as screw piles, roof trusses, staircases or precast concrete elements are manufactured offsite and then incorporated into the construction process.

Category 4: Pre-Manufacturing - Additive Manufacturing

This category includes cutting-edge techniques like 3D printing, enabling the creation of bespoke components with minimal waste.

Category 5: Pre-Manufacturing - Non-Structural Assemblies and Sub-Assemblies

Pre-manufactured components, such as bathroom and kitchen pods or mechanical and electrical pods or pre-fabricated utility cupboards to streamline the construction phases.

Category 6: Traditional Building Product-Led Site Labour Reduction

This involves the use of materials and products, like large format internal walls or large-format bricks, pre-sized plasterboard and brick slips which reduce reliance on on-site labour.

Category 7: Site Process-Led Labour Reduction/Productivity Improvements

This category focuses on improving onsite processes through technology and efficient construction practices, such as robotics or digital and site management tools.

BENEFITS OF BUILDING WITH MMC

Speed of Delivery

MMC significantly reduces construction timelines with the groundworks and manufacture of the MMC systems happening simultaneously. The rapid installation of the MMC systems on-site further accelerates the construction phase.

Example: Dynamic Build Group has supported the delivery of residential and education projects, reducing the build time by as much as 50% when compared to traditional methods.



Dynamic Build Group - Social Housing



Dynamic Build Group - Nursery

Enhanced Quality Control

Offsite manufacturing ensures precision and consistency, minimising defects and meeting durability standards.

Example: Dynamic Build Group delivered a bespoke, complexed 1st floor school extension with a precision engineered solution that was manufactured and assembled to fit perfectly above the existing school hall.

Cost Savings

MMC optimises material usage, reduces onsite labour costs and construction timelines, which presents opportunities to deliver cost efficiencies.

Example: A Dynamic Build Group education project optimised a modern foundation and floor system with a SIPs superstructure to deliver the project with a 12% saving when compared to traditional construction.

BENEFITS OF BUILDING WITH MMC (CONTINUED)

Sustainability and Waste Reduction

MMC significantly reduces onsite waste and utilises sustainable materials lowering carbon emissions and supporting a more sustainable construction process.

Example: On a recent low-energy self-build project, the site's limited space and strict sustainability targets presented unique challenges. Our MMC approach, we optimised material usage and minimised waste through precise offsite manufacturing.

Reduction in Labour

Building with MMC reduces on-site labour by utilising pre-manufactured components, streamlining assembly and minimising the need for large workforces. This not only lowers costs but also accelerates project timelines while maintaining quality.

Example: Our dynamic teams recently installed 200+ modules with a 3 man team + crane.

Delivering Custom Designs

MMC offer unparalleled flexibility, allowing clients to achieve their exact design vision without compromising on efficiency or sustainability. With a wide range of systems and materials, MMC adapts seamlessly to diverse architectural styles and functional needs, offering bespoke solutions tailored to each project.

Example: We delivered a contemporary home with a mix of open-plan living spaces and private areas, large glazed elements, a vaulted ceiling, complexed dormer roof and more!



Dynamic Build Group - Education project



Dynamic Build Group - Self Build project

FAQ - FREQUENTLY ASKED QUESTIONS

1. What is Modern Methods of Construction (MMC)?

MMC refers to innovative construction techniques that streamline the building process. This includes volumetric modular construction, panelised systems and more. The goal is to improve efficiency, sustainability, and cost-effectiveness compared to traditional construction.

2. Are all MMC systems equal?

No, not all MMC systems are equal, and they can vary significantly in terms of sustainability, build speed, accreditation, cost and other factors. Our FAQ section is based upon our experiences and the leading MMC systems on projects that we supply and build.

3. Is MMC more expensive than traditional construction?

MMC can have higher upfront costs due to manufacturing and technology, but the overall project cost can be lower or cost neutral. Faster build times, reduced waste, and energy-efficient designs typically offset initial expenses.

4. Are MMC buildings durable?

Yes, MMC buildings are designed to meet or exceed traditional durability standards. Materials and systems undergo rigorous testing to ensure strength, longevity, and resistance to environmental factors.

5. Can I get a mortgage for an MMC home?

Yes, the availability has significantly increased for lenders of mortgages for MMC homes, especially if the home is certified by NHBC or a number of other leading accreditations. These certifications demonstrate long-term durability and insurability.

6. Do MMC homes comply with building regulations?

MMC builds must meet all the same building regulations and standards as traditionally built homes. These include structural safety, fire safety, energy efficiency, and more.

7. How sustainable is MMC compared to traditional methods?

MMC is significantly more sustainable. It reduces material waste, energy consumption, and on-site emissions. Many MMC projects also focus on using low-carbon materials and improving energy efficiency.

FAQ - FREQUENTLY ASKED QUESTIONS (CONTINUED)**8. Can MMC homes be customised?**

Yes, MMC homes can be highly customisable. Systems like panelised construction designs allow for flexibility in layouts, finishes, and features, offering bespoke solutions for clients.

9. How long does it take to build using MMC?

MMC projects are much faster than traditional builds. A typical MMC home can be completed in weeks rather than months, depending on the complexity and type of system used.

10. Are there size limitations with MMC?

No, MMC can be used for projects of all sizes, from small homes to large-scale commercial buildings. The modular nature of MMC makes it scalable and adaptable for various applications.

11. What are the main advantages of MMC over traditional construction?

- Faster construction timelines
- Cost saving
- Enhanced energy efficiency
- Improved quality control (factory manufacturing)
- Greater sustainability and reduced carbon footprint

12. Can I choose the cladding and roof finishes for my MMC building?

Yes, MMC buildings are highly versatile in terms of aesthetics. You can choose from a wide range of cladding and roof finishes, including brick slips, timber, render, tiles, or metal. This allows you to achieve the desired appearance while still benefiting from the efficiency and sustainability of MMC.

13. Can MMC be integrated with traditional construction methods?

Absolutely. MMC can be seamlessly combined with traditional construction. For example, you can use MMC components like pre-manufactured walls or roof panels alongside traditionally built foundations or other structural elements.

This guide offers a valuable introduction to Modern Methods of Construction (MMC) system. However, it's just the beginning MMC is a diverse and evolving field, with countless systems and approaches that can be tailored to meet your requirements and goals.

At Dynamic Build Group, we've developed a comprehensive framework to identify the most efficient and sustainable MMC solutions for every unique project. From our learning hub to supply and full project delivery, our expertise ensures you don't just choose an MMC system you choose the *right* one.

ACADEMY

Join the MMC Revolution!

Our Academy empowers you with the skills, knowledge, and connections to deliver understand MMC and deliver projects more efficiently, reduce costs, and increase sustainability.

As a member of the exclusive MMC Academy, you'll unlock insider knowledge, connect with industry-leading experts, access exclusive discounts and gain the tools to master Modern Methods of Construction (MMC)

- ✓ **Resources:** Explore a treasure trove of templates, guides, checklists and more.
- ✓ **Webinars:** Gain valuable insights into real-world applications of MMC.
- ✓ **Masterclasses:** Deep dive into MMC techniques and strategies.
- ✓ **Q&A Sessions:** Get your questions answered directly by industry experts.
- ✓ **Exclusive Discounts:** Save on the costs across our partners and supply chain.
- ✓ **Mentorships:** Step by step guidance and support to help you excel in MMC.

What you will gain from Joining?

- ✓ **Save Time & Money:** Understand how to save time, cut costs and reduce carbon.
- ✓ **Expertise:** Optimise your projects with expert knowledge and best practices.
- ✓ **Confidence:** Learn to navigate the complexities and avoid costly mistakes.
- ✓ **Network:** Access to a like-minded network and proven MMC supply chain and professionals.

Interested in learning more please email gavin@dynamicbuilduk.com

SUPPLY

Our offsite division simplify and accelerate construction projects with our Modern Methods of Construction (MMC) supply and installation service.

- ✓ **Digital Design (DfMA):** advanced design tools to optimise construction and in use operation.
- ✓ **Supply:** leading SIPs, timber frame, ICF and Modular systems tailored to your projects.
- ✓ **Installation:** expertly assembling offsite-manufactured elements on-site.
- ✓ **Project Management:** Coordinating the delivery of the MMC element of your build.

Integrating the supply and installation of MMC into a single package streamlines the construction process, reducing coordination challenges, delays and costs. This approach ensures seamless compatibility between components, improved quality control and faster project delivery with a hassle-free and efficient client experience.

Interested in learning more please email gavin@dynamicbuilduk.com

BUILD

Our construction division transforms projects through an Modern Methods of Construction (MMC) first approach that accelerates and streamlines the entire construction process.

Our approach expertly integrates of MMC, Construction and Technology to deliver faster build times, competitive costs and enhanced sustainability.

- ✓ **Pre-construction**
- ✓ **Project Management**
- ✓ **Cost Management**
- ✓ **Groundworks**
- ✓ **Supply MMC**
- ✓ **Construction Works**

Integrating MMC and construction into a single package with our expert team who understand MMC and construction ensures a cohesive approach, improving efficiency, reducing risk and enabling faster delivery with expert oversight at every stage, from design to completion.

Interested in learning more please email gavin@dynamicbuilduk.com



MMC: ACADEMY | SUPPLY | BUILD

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